



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/865,528	05/29/2001	Keizo Yamada	NEC-F92/USA	4338

7590 06/04/2003  
McGinn & Gibb, PLLC  
8321 Old Courthouse Road, Suite 200  
Vienna, VA 22182-3817

EXAMINER

NGUYEN, VINH P

ART UNIT	PAPER NUMBER
----------	--------------

2829

DATE MAILED: 06/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/865,528

Applicant(s)

YAMADA, KEIZO

Examiner

VINH P NGUYEN

Art Unit

2829

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on the amendment filed on 03/12/03.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 2-13 and 15-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 14 and 26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

Art Unit: 2829

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 14 (insofar as understood) are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawamoto et al (Pat # 5,453,994).

As to claims 1 and 26, Kawamoto et al disclose a test system as shown in figure 1 having a test sample (1) to be tested, current measuring means (3,4b) for measuring current generated in the sample by the beam irradiation (7) from beam irradiating means (not shown) and comparator means (5c) for comparing the measured current signal from the current measuring means (3,4b) with expected values (5b) (read as second test sample) in order to determine if there is an existed OBIC signals. It is noted that the device of Kawamoto et al does not mentioned about the memory means, the position on the test sample at which a difference exists and the scanning second test sample. However, it would have been obvious for one of ordinary skill in the art to recognize that the comparator (5c) would inherently have memory means for storing the measured current signals in order to perform its task. Furthermore, by observing the output from the comparator, one of ordinary skill in the art would also recognize that the position at which the difference exists. Giedd teaches that it would have been well known for one of ordinary skill in the art to provide test signals to both physical logic under test (20) and a reference logic (30) and to use the comparator (40) for comparing the differences. It would

have been obvious for one of ordinary skill in the art to considered that the expected values (5b) could come from a physical reference test sample as taught by Giedd since this is an alternative way to obtain the expected values by using a physical reference device.

3. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawamoto et al (Pat # 5,453,994).

As to claim 14, Kawamoto et al disclose a test system as shown in figure 1 having a test sample (1) to be tested, current measuring means (3,4b) for measuring current generated in the sample by the beam irradiation (7) from beam irradiating means (not shown) and comparator means (5c) for comparing the measured current signal from the current measuring means (3,4b) with expected values (5b) (read as second test sample) in order to determine if there is an existed OBIC signals. It is noted that the device of Kawamoto et al does not mentioned about the memory means, the position on the test sample at which a difference exists and the scanned second test sample. However, it would have been obvious for one of ordinary skill in the art to recognize that the comparator (5c) would inherently have memory means for storing the measured current signals in order to perform its task. Furthermore, by observing the output from the comparator, one of ordinary skill in the art would also recognize that the position at which the difference exists. Giedd teaches that it would have been well known for one of ordinary skill in the art to provide test signals to both physical logic under test (20) and a reference logic (30)

and to use the comparator (40) for comparing the differences. It would have been obvious for one of ordinary skill in the art to consider that the expected values (5b) could come from a physical reference test sample as taught by Giedd since this is an alternative way to obtain the expected values by using a physical reference device.


It is noted that the reference logic of Giedd is not CAD data. It is a physical device.

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Shida et al (Pat # 5,757,198) disclose method and apparatus for detecting an IC defect using charged particle beam.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to VINH P. NGUYEN whose telephone number is (703) 305-4914.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4900.

  
VINH P. NGUYEN  
PRIMARY EXAMINER  
ART UNIT 2829

05/23/03